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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,844	03/31/2004	Sridhar Varadarajan	4544-043813	6067
Richard L. Byrne 7590 700 Koppers Building 436 Seventh Avenue Pittsburgh, PA 15219-1818				
EXAMINER MANSFIELD, THOMAS L				
ART UNIT 3624		PAPER NUMBER		
MAIL DATE 04/29/2009		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/813,844

**Applicant(s)**

VARADARAJAN ET AL.

**Examiner**

THOMAS MANSFIELD

**Art Unit**

3624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-13 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date 12 July 2004  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Status of Claims

1. This First Office action is in reply to the response to election/restriction requirement filed on 26 November 2008.
2. Claims 1-13 have been elected without traverse.
3. Claims 14 and 15 have been withdrawn from consideration.
4. Claims 1-13 are currently pending and have been examined.

### *Specification*

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.  
The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. **It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited.** The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-13 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility.

Claim 1 recites a system for skill management of a plurality of knowledge workers in a software industry. Although Claim 1 recites a system and subsystem, there is no structure to support the results of the organizer subsystem, skill assessment subsystem, evolution subsystem, skill matching subsystem, and skill representation subsystem. Claims 2-13 depend from Claim 1 and have the same deficiencies and missing elements and are rejected for the same rationale.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. §112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 2-13 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
10. Claim elements, "means for processing", "means for assessing", "means for incrementally updating", "means for matching", and, "means for optimal resource assignment", are means (or step) plus function limitations that invoke 35 U.S.C. § 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed functions. There are no corresponding computer architecture components capable of performing

and executing the assessing, updating, matching, and optimal assignment steps within Claims 2-13 or independent Claim 1 from which these claims depend.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by McCall et al. (McCall) (U.S. 7,191,176).

With regard to Claim 1, McCall teaches *a system for skill management (reciprocal data file publishing and matching system 20) of a plurality of knowledge workers (job-seekers) in a software industry (network-or Internet-based marketplace) based on continuous tracking of skills obtained by said knowledge workers, said system comprising (see at least column 6, lines 36-64 and column 14, lines 41-65):*

*(a) a skill organizer subsystem for tracking of skills of said plurality of knowledge workers, said skill organizer comprising: a qualification management (Category A data file 405 (referred to herein as an "eres", qualifications and preferences of an individual job-seeker) element for managing skills of said plurality of knowledge workers based on qualification; a resume management element for managing skills of said plurality of knowledge workers based on resume (resume segment 407); and a project information management element for managing skills of*

*said plurality of knowledge workers based on project information* (Category B data file **410**, job description segment **412**, erole **410**) (see at least column 22, line 22 through column 26, line 15);

*(b) a skill assessment subsystem for assessing skills of said plurality of knowledge workers* (Category A enhancement object is an assessment of the thinking styles of the job-seeker) (see at least column 6, lines 47-65);

*(c) a skill evolution subsystem for incrementally updating skills of said plurality of knowledge workers* (to create or update the respective enhancement objects 430) (see at least column 40, line 1 through column 41, line 10);

*(d) a skill matching subsystem (professional skills assessment system) for matching skills of said plurality of knowledge workers with respect to a set of requirements* (see at least column 25, line 7 through column 26, line 12);

*(e) a skill representation subsystem for managing representation of a plurality of key elements of said system comprising qualification (qualifications), resume (resume), reference (list of references), past work experience (past experiences), and current work experience (work experiences, current marketplace)* (see at least column 22, line 22 through column 28, line 32).

With regard to Claim 2, McCall teaches *wherein said qualification management element* (Category A data file **405**, eres) *of said skill organizer subsystem comprises means for processing qualification information of a knowledge worker comprising consistency verification of qualification information of said knowledge worker ("must" indicator, "must" feature), and consistency verification of qualification information with related information associated with said knowledge worker* (relationship map object, intelligent agent **415**) (see at least column 22, line 22 through column 28, line 32).

With regard to Claim 3, McCall teaches *wherein said resume management element of said skill organizer subsystem comprises means for processing information* (Overview of the Eres Management Process) *contained in a resume of an entry level knowledge worker comprising*

*extraction of qualification, field of study, and grade from said resume (defined in the erole 410 match a corresponding experience or skill listed in the resume segment 407), and consistency verification of information contained in said resume of said entry level knowledge worker (see at least column 2, lines 1-14, column 26, line 17 through column 28, line 12).*

With regard to Claim 4, McCall teaches *wherein said resume management element further comprises means for processing information contained in a resume (Overview of the Eres Management Process) of an experienced knowledge worker comprising extraction of qualification, field of study, and grade from said resume, extraction of field of work, major area, and grade related to a plurality of experiences of said experienced knowledge worker, extraction of field of work, major area, and grade from a plurality of references provided by said experienced knowledge worker (defined in the erole 410 match a corresponding experience or skill listed in the resume segment 407), and consistency verification of information contained in said resume of said experienced knowledge worker (see at least column 2, lines 1-14, column 26, line 17 through column 28, line 12).*

With regard to Claim 5, McCall teaches *wherein said project information management element of said skill organizer subsystem comprises means for processing project related information on completion of a project comprising processing of project profile and project plan of said project, identification of a plurality of work items of said project, identification of a plurality of knowledge workers assigned to each of said plurality of work items, obtaining a plurality of skills associated with each of said plurality of work items, extraction of field of work, major area, and grade for each of said plurality of knowledge workers of each of said plurality of work items, and consistency verification of skill grade information of each of said plurality of knowledge workers of each of said plurality of work items (Category B data file 410, job description segment 412, erole 410) (see at least column 22, line 22 through column 26, line 15).*

With regard to Claim 6, McCall teaches *wherein said skill assessment subsystem comprises means for assessing basic skills of a knowledge worker* (professional skills assessment), *wherein said assessment is based on qualification of said knowledge worker* (qualifications and preferences), *field of study of said knowledge worker* (academic experiences), *and domain specialization of said knowledge worker* (desired career focus, special training), *and wherein said assessment comprising determination of qualification, field of study, and grade of said knowledge worker, determination of a skill grade of said knowledge worker based on application of a plurality of rules using qualification, field of study, and grade of said knowledge worker, and consistency verification of said skill grade of said knowledge worker* (reciprocal workplace preferences assessment) (see at least column 2, lines 1-14, column 22, line 22 through column 28, line 12 and Claim 1).

With regard to Claim 7, McCall teaches *wherein said skill assessment subsystem further comprises means for assessing advanced skills of an experienced knowledge worker* (professional skills assessment), *wherein said assessment is based on qualification* (qualifications and preferences), *field of study* (academic experiences), *field of work* (career focus areas), *and references* (list of references) *related to said experienced knowledge worker, and said assessment comprising determination of a plurality of work experiences of said experienced knowledge worker* (past work experiences), *assignment of a weight* (setting a "weight") *to each of said plurality of work experiences, determination of a skill grade based on said weight of each of said plurality of work experiences* (fit value, match factors), *scaling of said skill grade based on a plurality of referrals, and consistency verification of said skill grade of said experienced knowledge worker* (scoring) (see at least column 2, lines 1-14, column 22, line 22 through column 28, line 12, column 41 lines 11-66, column 55, line 40 through column 57, line 26, and Claim 1).

With regard to Claim 8, McCall teaches *wherein said skill evolution subsystem comprises means for incrementally updating skills of a knowledge worker based on working on a project*



*comprising determination of a plurality of major areas of contribution of said knowledge worker in said project, assessment of a skill grade based on a plurality of metrics of said project and a plurality of project end appraisals of said project, consistency verification of said skill grade of said knowledge worker, determination of an overall skill grade using a plurality of skill grades of said knowledge worker based on a plurality of project experiences of said knowledge worker and a plurality of training experiences of said knowledge worker (update, modify) (see at least column 22, line 22 through column 26, line 15).*

*With regard to Claim 9, McCall teaches wherein said skill evolution subsystem further comprises means for incrementally updating skills of a knowledge worker based on a training program comprising determination of a plurality of major areas of training of said knowledge worker in said training program, assessment of a skill grade based on a plurality of metrics of said training program and a plurality of training end appraisals of said training program, consistency verification of said skill grade of said knowledge worker, determination of an overall skill grade using a plurality of skill grades of said knowledge worker based on a plurality of project experiences of said knowledge worker and a plurality of training experiences of said knowledge worker (training, enhancement objects 430) (see at least column 4, lines 14-54 and column 22, line 22 through column 26, line 15).*

*With regard to Claim 10, McCall teaches wherein said skill matching subsystem comprises means for matching a skill of a knowledge worker with respect to a project specific skill for a period, wherein said matching is based on nearness of said skill and said project specific skill with respect to a skill hierarchy, extent of availability of said knowledge worker during said period, and combined evaluation based on said skill of said knowledge worker, availability of said knowledge worker during said period, said project specific skill, and said skill hierarchy (see at least column 2, lines 1-14, column 22, line 22 through column 28, line 12, column 41 lines 11-66, column 55, line 40 through column 57, line 26, and Claim 1).*

With regard to Claim 11, McCall teaches wherein said skill matching subsystem further comprises means for skill matching of a plurality of knowledge workers and a plurality of skills related to a project comprising analyzing said project to determine period and number of resources required with each of said plurality of skills, division of said plurality of skills into a plurality of non-overlapping subsets of said plurality of skills, and near-optimal assignment of a subset of said plurality of knowledge workers to said project based on each of said plurality of non-overlapping subsets (optimal format for comparison) (see at least column 2, lines 1-14, column 22, line 22 through column 28, line 12, column 41 lines 11-66, column 55, line 40 through column 57, line 26).

With regard to Claim 12, McCall teaches wherein said skill matching subsystem further comprises means for iterative skill matching of a plurality of skills, with each of said plurality of skills requiring a plurality of knowledge workers over a distinct period, comprising determination of a plurality of singleton skills based on said plurality of skills with each of said plurality of singleton skills requiring only one knowledge worker, and optimal assignment of a plurality of knowledge workers based on extent of match of a plurality of skills of said plurality of knowledge workers with said plurality of singleton skills, and extent of availability of said plurality of knowledge workers during said distinct period of each of said plurality of singleton skills (characteristic, standardization mechanism) (see at least column 41, line 11 through column 42, line 60).

With regard to Claim 13, McCall teaches wherein said skill matching subsystem further comprises means for optimal resource assignment based on a skill matrix and a resource matrix, wherein said skill matrix depicts a plurality of basic skills and a plurality of skills that are nearer to each of said plurality of basic skills with respect to a skill hierarchy, and said resource matrix depicts the availability of a plurality of knowledge workers with respect to said plurality of basic skills, comprising maximization of summation of a plurality of products of each of plurality of elements of said resource matrix with a corresponding element of said skill matrix, ensuring that a

*knowledge worker is assigned only once, ensuring that number of knowledge workers assigned is equal to the number of distinct skills in said plurality of basic skills, and ensuring that a knowledge worker is either assigned or not assigned (fuzzy logic algorithm) (see at least column 56, line 23 through column 58, line 49).*

### **Conclusion**

13. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- DiMarco (U.S. Pub. No. 2003/0177027) discloses a multi-purpose talent management and career management system.
- Presnell et al. (U.S. 6,182,067) discloses methods and systems for knowledge management.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS MANSFIELD whose telephone number is (571)270-1904. The examiner can normally be reached on Monday-Thursday 8:30 am-6 pm, alt. Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bradley Bayat can be reached on 571-272-6704. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. M./  
Examiner, Art Unit 3624

24 April 2009  
Thomas Mansfield

/Bradley B Bayat/  
Supervisory Patent Examiner, Art Unit 3624